

Claims;

1. A method of forming a toner image, comprising:  
electrically charging a photoreceptor comprising an organic photosensitive layer provided on a cylindrical substrate;  
imagewise exposing the photoreceptor so that a latent image is formed on the photoreceptor;  
developing the latent image with toner so that a toner image is formed on the photoreceptor;  
transferring the toner image to a recording material from the photoreceptor; and  
cleaning residual toner on the photoreceptor by cleaning blade; wherein  
the photoreceptor is installed so that the center axis of the cylinder is to be almost horizontal,  
front edge of the cleaning blade is pressed against surface of the photoreceptor so that cylindrical center angle  $\beta$  of the cylindrical photoreceptor is at an angle of within  $\pm 30^\circ$  with respect to  $0^\circ$  of the vertical line passing the center axis of the cylindrical photoreceptor,

ratio of width of the photosensitive layer of the photoreceptor to length of the cylindrical electroconductive substrate is 80/100 to 99/100, and

a number ratio of toner particles having a shape coefficient of 1.2 to 1.6 is at least 65 percent in the toner particles.

2. A method of forming a toner image, comprising:

electrically charging a photoreceptor comprising an organic photosensitive layer provided on a cylindrical substrate;

imagewise exposing the photoreceptor so that a latent image is formed on the photoreceptor;

developing the latent image with toner so that a toner image is formed on the photoreceptor;

transferring the toner image to a recording material from the photoreceptor; and

cleaning residual toner on the photoreceptor by cleaning blade; wherein

the photoreceptor is installed so that the center axis of the cylinder is to be almost horizontal,

front edge of the cleaning blade is pressed against surface of the photoreceptor so that cylindrical center angle

$\beta$  of the cylindrical photoreceptor is at an angle of within  $\pm 30^\circ$  with respect to  $0^\circ$  of the vertical line passing the center axis of the cylindrical photoreceptor,

ratio of width of the photosensitive layer of the photoreceptor to length of the cylindrical electroconductive substrate is 80/100 to 99/100, and

number ratio of toner particles having no corners is 50 percent or more with reference to whole toner particles.

3. A method of forming a toner image, comprising:

electrically charging a photoreceptor comprising an organic photosensitive layer provided on a cylindrical substrate;

imagewise exposing the photoreceptor so that a latent image is formed on the photoreceptor;

developing the latent image with toner so that a toner image is formed on the photoreceptor;

transferring the toner image to a recording material from the photoreceptor; and

cleaning residual toner on the photoreceptor by cleaning blade; wherein

the photoreceptor is installed so that the center axis of the cylinder is to be almost horizontal,

front edge of the cleaning blade is pressed against surface of the photoreceptor so that cylindrical center angle  $\beta$  of the cylindrical photoreceptor is at an angle of within  $\pm 30^\circ$  with respect to  $0^\circ$  of the vertical line passing the center axis of the cylindrical photoreceptor,

ratio of width of the photosensitive layer of the photoreceptor to length of the cylindrical electroconductive substrate is 80/100 to 99/100, and

the toner has M of at least 70 percent, M being sum of  $m_1$  and  $m_2$  wherein  $m_1$  is relative frequency of toner particles, included in the most frequent class, and  $m_2$  is relative frequency of toner particles included in the second frequent class in a histogram showing the particle size distribution, which is drawn in such a manner that natural logarithm  $\ln D$  is used as an abscissa, wherein  $D$  (in  $\mu\text{m}$ ) represents the particle diameter of a toner particle, while being divided into a plurality of classes at intervals of 0.23, and number of particles is used as an ordinate.

4. A method of forming a toner image, comprising:

electrically charging a photoreceptor comprising an organic photosensitive layer provided on a cylindrical substrate;

imagewise exposing the photoreceptor so that a latent image is formed on the photoreceptor;

developing the latent image with toner so that a toner image is formed on the photoreceptor;

transferring the toner image to a recording material from the photoreceptor; and

cleaning residual toner on the photoreceptor by cleaning blade; wherein

the photoreceptor is installed so that the center axis of the cylinder is to be almost horizontal,

front edge of the cleaning blade is pressed against surface of the photoreceptor so that cylindrical center angle  $\beta$  of the cylindrical photoreceptor is at an angle of within  $\pm 30^\circ$  with respect to  $0^\circ$  of the vertical line passing the center axis of the cylindrical photoreceptor,

ratio of width of the photosensitive layer of the photoreceptor to length of the cylindrical electroconductive substrate is 80/100 to 99/100, and

the toner has a number variation coefficient of the number distribution of the toner particle of not more than 27%.

5. A method of forming a toner image of claim 4, wherein the toner has a number variation coefficient of the number distribution of the toner particle of not more than 25%.

6. A method of forming a toner image, comprising:

electrically charging a photoreceptor comprising an organic photosensitive layer provided on a cylindrical substrate;

imagewise exposing the photoreceptor so that a latent image is formed on the photoreceptor;

developing the latent image with toner so that a toner image is formed on the photoreceptor;

transferring the toner image to a recording material from the photoreceptor; and

cleaning residual toner on the photoreceptor by cleaning blade; wherein

the photoreceptor is installed so that the center axis of the cylinder is to be almost horizontal,

front edge of the cleaning blade is pressed against surface of the photoreceptor so that cylindrical center angle  $\beta$  of the cylindrical photoreceptor is at an angle of within  $\pm 30^\circ$  with respect to  $0^\circ$  of the vertical line passing the center axis of the cylindrical photoreceptor,

ratio of width of the photosensitive layer of the photoreceptor to length of the cylindrical electroconductive substrate is 80/100 to 99/100, and

the toner has a number variation coefficient of the shape coefficient of the toner particle of not more than 16%.

7. A method of forming a toner image, comprising:

electrically charging a photoreceptor comprising an organic photosensitive layer provided on a cylindrical substrate;

imagewise exposing the photoreceptor so that a latent image is formed on the photoreceptor;

developing the latent image with toner so that a toner image is formed on the photoreceptor;

transferring the toner image to a recording material from the photoreceptor; and

cleaning residual toner on the photoreceptor by  
cleaning blade; wherein

the photoreceptor is installed so that the center axis  
of the cylinder is to be almost horizontal,

front edge of the cleaning blade is pressed against  
surface of the photoreceptor so that cylindrical center angle  
 $\beta$  of the cylindrical photoreceptor is at an angle of within  
 $\pm 30^\circ$  with respect to  $0^\circ$  of the vertical line passing the  
center axis of the cylindrical photoreceptor,

ratio of width of the photosensitive layer of the  
photoreceptor to length of the cylindrical electroconductive  
substrate is 80/100 to 99/100, and

the toner contains toner particles having a shape  
coefficient of from 1.2 to 1.6 in a ratio of not less than  
65% in number and a variation coefficient of the shape  
coefficient of not more than 16%.

8. A method of forming a toner image, comprising:

electrically charging a photoreceptor comprising an  
organic photosensitive layer provided on a cylindrical  
substrate;



imagewise exposing the photoreceptor so that a latent image is formed on the photoreceptor;

developing the latent image with toner so that a toner image is formed on the photoreceptor;

transferring the toner image to a recording material from the photoreceptor; and

cleaning residual toner on the photoreceptor by cleaning blade; wherein

the photoreceptor is installed so that the center axis of the cylinder is to be almost horizontal,

front edge of the cleaning blade is pressed against surface of the photoreceptor so that cylindrical center angle  $\beta$  of the cylindrical photoreceptor is at an angle of within  $\pm 30^\circ$  with respect to  $0^\circ$  of the vertical line passing the center axis of the cylindrical photoreceptor,

ratio of width of the photosensitive layer of the photoreceptor to length of the cylindrical electroconductive substrate is 80/100 to 99/100, and

the toner contains toner particles having a variation coefficient of the shape coefficient of not more than 16% and a variation coefficient of the particle number in the particle size distribution of not more than 27%.

9. A method of forming a toner image, comprising:
- electrically charging a photoreceptor comprising an organic photosensitive layer provided on a cylindrical substrate;
  - imagewise exposing the photoreceptor so that a latent image is formed on the photoreceptor;
  - developing the latent image with toner so that a toner image is formed on the photoreceptor;
  - transferring the toner image to a recording material from the photoreceptor; and
  - cleaning residual toner on the photoreceptor by cleaning blade; wherein
- the photoreceptor is installed so that the center axis of the cylinder is to be almost horizontal,
  - front edge of the cleaning blade is pressed against surface of the photoreceptor so that cylindrical center angle  $\beta$  of the cylindrical photoreceptor is at an angle of within  $\pm 30^\circ$  with respect to  $0^\circ$  of the vertical line passing the center axis of the cylindrical photoreceptor,

ratio of width of the photosensitive layer of the photoreceptor to length of the cylindrical electroconductive substrate is 80/100 to 99/100, and

the toner particles are prepared by association of particles obtained by polymerization of monomers in a water based medium.

10. A method of forming a toner image, comprising:

electrically charging a photoreceptor comprising an organic photosensitive layer provided on a cylindrical substrate;

imagewise exposing the photoreceptor so that a latent image is formed on the photoreceptor;

developing the latent image with toner so that a toner image is formed on the photoreceptor;

transferring the toner image to a recording material from the photoreceptor; and

cleaning residual toner on the photoreceptor by cleaning blade; wherein

the photoreceptor is installed so that the center axis of the cylinder is to be almost horizontal,

front edge of the cleaning blade is pressed against surface of the photoreceptor so that cylindrical center angle

$\beta$  of the cylindrical photoreceptor is at an angle of within  $\pm 30^\circ$  with respect to  $0^\circ$  of the vertical line passing the center axis of the cylindrical photoreceptor,

ratio of width of the photosensitive layer of the photoreceptor to length of the cylindrical electroconductive substrate is 80/100 to 99/100, and

contacting width of the cleaning blade is wider than width of the photosensitive layer of the organic photoreceptor.

11. A method of forming a toner image, comprising:

electrically charging a photoreceptor comprising an organic photosensitive layer provided on a cylindrical substrate;

imagewise exposing the photoreceptor so that a latent image is formed on the photoreceptor;

developing the latent image with toner so that a toner image is formed on the photoreceptor;

transferring the toner image to a recording material from the photoreceptor; and

cleaning residual toner on the photoreceptor by cleaning blade; wherein

the photoreceptor is installed so that the center axis of the cylinder is to be almost horizontal,

front edge of the cleaning blade is pressed against surface of the photoreceptor so that cylindrical center angle  $\beta$  of the cylindrical photoreceptor is at an angle of within  $\pm 30^\circ$  with respect to  $0^\circ$  of the vertical line passing the center axis of the cylindrical photoreceptor,

ratio of width of the photosensitive layer of the photoreceptor to length of the cylindrical electroconductive substrate is 80/100 to 99/100, and

the photoreceptor comprises a protective layer containing a compound containing a fluorine or silicone atom.